

# Sun Shows Off A 10-MIPS Workstation

BY JENNY McCUNE

**NEW YORK** — Sun Microsystems Inc., as expected, last week unleashed a 10-MIPS, RISC-based "supercomputing" workstation.

In addition, Sun said it will market the unit's processor chip to OEMs via a pact with Fujitsu Ltd. and two other semiconductor companies.

Designed to boost the performance of Sun workstations, the Sun-4 family is billed as having the performance of a Digital Equipment Corp. VAX 8800, at one-tenth the price.

The Sun-4 is the first in a series of RISC products, Sun said it will roll out a 64-MIPS machine in 1990.

Sun executive vice president Bernie Lacroix said: "We believe we are widening the gap between Sun and the traditional competition that is selling workstations."

Sun is the first large workstation vendor to come out with a desktop product offering so much performance. However, Sun won't have long to enjoy its lead. Several competitors, including Apollo Computer Inc., are said to be preparing similar machines.

But being first does have advantages. "People who do need that type of class of machine will be tempted to go with Sun rather than wait for others," said Charles Foundyler, president of Daratech Inc. "Sun has certainly established a psychological lead, if not a real lead."

The Sun-4 is only one prong of Sun's RISC marketing strat-

ter the OEM component market. The company plans to license the RISC processor and its operating system, development tools and C compiler to Fujitsu, Cypress Semiconductor Corp. and Bipolar Integrated Technology Inc. (BIT). Those companies will market the products to OEMs and board manufacturers.

Each company will sell a different version of the chip. Fujitsu said it plans to give the chip significant performance improvements, using its CMOS gate array technology. Samples of the current chip are now available from Fujitsu, and volume shipments are scheduled within six months.

Cypress said it will use the Sun chip as the building block for a high-performance RISC microprocessor. The Cypress version will be a second-generation design developed jointly by Cypress and Sun. Samples are scheduled to become available in six months, with volume deliveries expected in mid-1988.

BIT will produce a 32-bit, bipolar RISC integrated circuit under its license with Sun that will use emitted coupled logic. The chip set, expected to offer five times more performance than the current processor, is slated to be available in 1988. Pricing for the chips has not yet been set by any of the three semiconductor companies.

By offering the chips on an OEM basis, Sun is attempting to make its RISC processors the standard for workstations, according to Foundyler. That is similar to Sun's approach with

Systems and NeWs. Sun offers those products to OEMs for use with their systems.

"It's an extremely crafty strategy," Foundyler said. However, he added, "There is an Achilles heel—while Sun is gaining the benefit of the popularity, it loses the edge of being unique."

Foundyler, though calling the approach intriguing, gave Sun only a 50 percent chance of successfully selling its technology and software to other hardware vendors. Other analysts shared his view.

"How many other systems companies would be interested in adopting the architecture, and in effect be dependent on Sun?" asked Hambrecht & Quist analyst Robert Herwick. "Frankly, I think it's optimistic to think that other systems companies will be anxious to adopt their architecture."

In addition to the versions marketed by Fujitsu, Cypress and BIT, Sun will market the system through its traditional OEM and direct sales channels. The company said it does not plan to abandon its Motorola Inc.-based line. A product based on the Motorola 68030 is scheduled for release late this year.

Because of its increased power and performance, the company hopes the Sun-4 will extend Sun into new markets, including artificial intelligence, high-end mechanical CAD and electrical CAD. In conjunction with the hardware announcement, the company rolled out a set of AI software tools.

Sun unwrapped three Sun-4

hard disk drive subsystem and a 1/4-inch, 60-Mbyte cartridge tape system is \$85,500.

A high-end server model comes in different configurations. The price ranges from \$36,900 for the Sun-4/260S

with 8 Mbytes of memory, to \$104,900 for a Sun-4/280S server with 32 Mbytes of memory and 1.2 Gbytes of disk and tape storage.

The Sun-4 systems are available 60 to 90 days ARO.

## Sun Reassures Customers About Compatibility

**S**un Microsystems Inc. last week reassured customers that its new RISC-based workstations are compatible with its existing products, and said a bevy of software has been, or is being, ported to the new line.

Although the new Sun-4 line uses the Unix operating system, as do previous Sun products, the reassurance was necessary since the new workstations employ a different chip architecture.

The Sun-4 family is source-code compatible with the Sun-3 and Sun-2 lines, Sun said.

More than 90 third-party software developers have committed to porting products to the new systems, the company said. Last week, three of those vendors said they had easily ported their software to the systems.

Valid Logic Systems Inc. announced it has converted its Integrated Circuit design tools to run on the Sun-4, and is evaluating whether to port its complete line of EDA tools to the line.

Sierra Geophysics Inc. said 80 percent of its software for the exploration and development of oil, gas and mineral resources has been ported over to the platform.

Finally, Franz Products Inc. is making its entire line run on the new Sun systems. Franz software includes Allegro CL, an implementation of Common LISP.

In addition, Sun last week unveiled a set of program development tools for AI applications. Called the Symbolic Programming Environment (SPE), the tools are said to improve productivity and ease of program development in LISP and other symbolic languages.

The SPE tools, which are geared for code development, are integrated into the user interface offered on all Sun workstations. The tools include a special EMACS-style editor

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